

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Appl. No. : 10/707,981 Confirmation No. : 1980  
Applicants : Theodore J. Krellner et al.  
Filed : 1/29/04  
TC/A.U. : 1795  
Examiner : Jeffrey Thomas Barton  
Docket No. : 133073-2  
Title: Apparatus For Infrared Radiation Detection

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**REPLY BRIEF**

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Sir:

This Reply Brief is submitted in response to the Examiner's Answer mailed June 10, 2009.

**1.     THE REAL PARTY IN INTEREST**

The real party in interest in this appeal is General Electric Company. Ownership by General Electric Company is established by an assignment document recorded for this application on January 29, 2004, on Reel 014296 and Frame 0270.

**2.     STATUS OF CLAIMS**

Claims 1, 5 and 9-11 are currently pending and are the claims on appeal.

Claims 2-4, 6-8, and 12-20 have been cancelled.

Claim 1 was rejected under 35 U.S.C. §102(e) as being anticipated by Lambert et al. (U.S. Patent No. 6,828,560).

Claims 9 and 10 were rejected under 35 U.S.C. §103(a) as being unpatentable over Lambert et al. (U.S. Patent No. 6,828,560).

Claim 5 was rejected under 35 U.S.C. §103(a) as being unpatentable over Lambert et al. (U.S. Patent No. 6,828,560) in view of Watanabe et al. (U.S. Patent No. 5,056,929).

Claims 1, 5, and 9-11 were rejected under 35 U.S.C. §103(a) as being unpatentable over Endo et al. (U.S. Patent No. 5,693,942) in view of Watanabe et al. (U.S. Patent No. 5,056,929).

**3. GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

Whether claim 1 is anticipated under 35 U.S.C. §102(e) by Lambert et al. (U.S. Patent No. 6,828,560).

Whether claims 9 and 10 are unpatentable under 35 U.S.C. §103(a) over Lambert et al. (U.S. Patent No. 6,828,560).

Whether claim 5 is unpatentable under 35 U.S.C. §103(a) over Lambert et al. (U.S. Patent No. 6,828,560) in view of Watanabe et al. (U.S. Patent No. 5,056,929).

Whether claims 1, 5, and 9-11 are unpatentable under 35 U.S.C. §103(a) over Endo et al. (U.S. Patent No. 5,693,942) in view of Watanabe et al. (U.S. Patent No. 5,056,929).

#### 4. ARGUMENT

##### A. **THE EXAMINER'S REJECTION OF CLAIM 1 UNDER 35 U.S.C. §102(e) IS IMPROPER**

In the Examiner's Answer, the Examiner is attempting to *modify* the teachings of Lambert et al. by *mixing and matching components from two different embodiments* disclosed in the Lambert et al. in an attempt to obtain the limitations of claim 1, which is clearly improper for a 35 U.S.C. 102(e) rejection.

In particular, in the Examiner's Answer, referring to Figures 8 and 5 of Lambert et al, the Examiner is construing the upper portion 202 (Figure 8) in the sensor 200 as the metal base header of claim 1. Applicant, however, believes that the Examiner is technically referring to the layer 206, in Figure 8, since element 202 (also referred to as package 202) includes both a lower portion 204 and the upper portion 206. See Lambert et al., column 5, lines 55-57.

Further, the Examiner is construing the frame 12 (Figure 5) in the sensor 10 as the support rim of claim 1. See Final Office Action, page 3, lines 4-5. Applicant believes that the Examiner is technically referring to the body 20 in Figure 5, when referring to frame 12 in the Final Office Action, otherwise the Examiner's arguments do not make any sense to applicant.

The Examiner argues that it is the Examiner's position that the upper portion 202 (Figure 8) supports the support rim 12 (Figure 5) via its physical attachment thereto." See Examiner's Answer, page 7, lines 20-21, and Final Office Action, page 3, lines 4-5. Applicant respectfully disagrees. In particular, Figure 8 illustrates a sensor 200 and the Figure 5 illustrates a different sensor 10. Accordingly, there is simply no teaching in Lambert of mixing and matching the upper portion 202 from the sensor 200 in Figure 8 with the frame 12 of the sensor 10 in Figure 5. As such, applicant believes that the Examiner is misconstruing the teachings of Lambert et al.

The Examiner further notes that: "Alternatively, upper portion 202 is clearly capable of performing the intended use of "supporting the rim", were the structure of Figure 8 disposed such that the structure (which includes the support rim, relied on portion 202 for support." See Examiner's Answer, page 8, lines 1-3. Applicant points out the Examiner has not identified any teaching in Lambert et al. which supports the foregoing Examiner's assertion. In particular, the Examiner is simply attempting to mix and match components from two different embodiments disclosed in Lambert et al. in an attempt to obtain the limitations of claim 1, which is clearly improper under a 35 U.S.C. 102(e) rejection.

Thus, Lambert et al. does not teach or suggest: "a metal base header supporting the support rim, the metal base header having a second cavity therein communicating with the first cavity, the second cavity having a second predetermined maximum width at least as large as the first predetermined maximum width", as recited in claim 1.

Because Lambert et al. does not teach or suggest each and every limitation of independent claim 1, applicant submits that the rejection of claim 1 based on Lambert et al. under 35 U.S.C. §102(e) is improper.

**B. THE EXAMINER'S REJECTION OF CLAIMS 9 AND 10 UNDER 35 U.S.C. §103(a) IS IMPROPER**

The Examiner's rejection of claims 9 and 10 under 35 U.S.C. 103(a) is improper because Lambert et al. does not teach each and every limitation of claims 9 and 10. In the Examiner's Answer, the Examiner does not give any patentable weight to recited dimensional limitations of the depth of the second cavity of the metal base header, which applicant submits is improper. Further, the Examiner asserts that selection of a thickness of upper portion 202 in Lambert et al. would have been obvious to one having ordinary skill in the art depending on the desired degree of concentration. Applicant submits that the foregoing assertion does not make any sense to applicant. In particular, the wording

"desired degree of concentration" does not specify what concentration is being referred to. Further, there is simply no teaching or proper motivation identified for the proposed modification of the sensor of Lambert et al.

Claims 9 and 10 depend directly and indirectly, respectively, from claim 1 and therefore incorporate all of the limitations of claim 1. As discussed above, Lambert et al. does not teach or suggest: "a metal base header supporting the support rim, the metal base header having a second cavity therein communicating with the first cavity, the second cavity having a second predetermined maximum width at least as large as the first predetermined maximum width", as recited in claim 1, and claims 9 and 10.

Further, Lambert et al. does not teach or suggest: "a depth of the second cavity is equal to or greater than about 0.1 millimeter and equal to or less than about 10 millimeter", as recited in claim 9.

Further, Lambert et al. does not teach or suggest: "the depth of the second cavity is about 1 millimeter", as recited in claim 10 as amended.

Because Lambert et al. does not teach or suggest each and every limitation of independent claim 1, and dependent claims 9 and 10 which depend from claim 1, applicant submits that the rejection of claims 9 and 10 based on Lambert et al. under 35 U.S.C. §103(a) is improper.

### **C. THE EXAMINER'S REJECTION OF CLAIM 5 UNDER 35 U.S.C. §103(a) IS IMPROPER**

The Examiner's rejection of claim 5 under 35 U.S.C. 103(a) is improper because the combination of Lambert et al. and Watanabe et al. does not teach each and every limitation of the claim 5. Claim 5 depends from claim 1 and therefore incorporates all of the limitations of claim 1.

In the Examiner's Answer, the Examiner asserts that Lambert et al. teaches: "a metal base header supporting the support rim, the metal base header having a second cavity therein communicating with the first cavity, the second cavity having a second predetermined maximum width at least as large as the first predetermined maximum width", as recited in claim 1. As discussed above, Lambert et al. does not disclose any embodiment that teaches or suggests these limitations of claim 1. Further, Watanabe et al., alone or in combination with Lambert et al., does not teach or suggest these limitations of claim 1.

Because Lambert et al. and Watanabe et al., alone or in combination, do not teach or suggest each and every limitation of independent claim 1, and dependent claim 5 which depends from claim 1, applicant submits that the rejection of claim 5 based on these references under 35 U.S.C. §103(a) is improper.

**D. THE EXAMINER'S REJECTION OF CLAIMS 1, 5, AND 9-11 UNDER 35 U.S.C. §103(a) IS IMPROPER**

The Examiner's rejection of claims 1, 5 and 9-11 under 35 U.S.C. 103(a) is improper because no proper motivation has been provided for the combination of Endo et al. and Watanabe et al.

In the Examiner's Answer, referring to Fig. 3 of Watanabe, the Examiner argues that based on the teachings of Watanabe et al. and Endo et al. it would have been obvious to remove the thermopile element 1 from the thermistor 2 to obtain a sensor that could provide an accurate temperature measurement. However, applicant submits that Watanabe et al. actually teaches away from removing the thermopile element 1 from the thermistor 2 and utilizing only the thermopile element 1, because doing so would result in a sensor which is not temperature compensated that could output inaccurate measurements. In particular, Watanabe et al. recites:

"To obtain the first object of the present invention, the present invention



provides an infrared sensor which comprises a diaphragm-like thermopile element disposed on a thermistor chip for compensating the temperature." See Watanabe et al., column 3, lines 5-9.

Further, Watanabe et al. in each disclosed embodiment teaches that in order to obtain an accurate temperature compensated measurement, a thermopile element disposed on a thermistor chip is required. See Fig. 3, with thermopile element 1 disposed on thermistor 2. See Fig. 6 with thermistor 2 and column 6, lines 29-30 indicating a thermopile element is bonded to the thermistor 2. Accordingly, Watanabe et al. actually teaches away from removing a thermopile element 1 from the thermistor 2 and utilizing only a thermopile element.

Because Watanabe et al. teaches away from the proposed combination, applicant submits that the rejection of claims 1, 5 and 9-11 based on Endo et al. and Watanabe et al. under 35 U.S.C. §103(a) is improper.

Referring to claim 9, applicant submits that Endo et al. and Watanabe et al., alone or in combination, do not teach or suggest: "wherein a depth of the second cavity is equal to or greater than about 0.1 millimeter and equal to or less than about 10 millimeter."

Because Endo et al. and Watanabe et al., alone or in combination, do not teach each and every limitation of claim 9, applicant submits that the rejection of claim 9 based on these references under 35 U.S.C. §103(a) is improper.

Referring to claim 10, applicant submits that Endo et al. and Watanabe et al., alone or in combination, do not teach or suggest: "wherein the depth of the second cavity is about 1 millimeter."

Because Endo et al. and Watanabe et al., alone or in combination, do not teach or suggest each and every limitation of claim 10, applicant submits that the rejection of claim 10 based on these references under 35 U.S.C. §103(a) is improper.

**E. CONCLUSION**

In view of the foregoing arguments, applicant respectfully submits that the recited claims are novel and unobvious. Further, a reversal of the rejections of record, or such recommendation or relief as equity may require, is respectfully requested.

Respectfully Submitted,

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